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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,450	01/19/2007	Ken Takahashi	4386.74850	2440
24978	7590	03/16/2010		
GREER, BURNS & CRAIN 300 S WACKER DR 25TH FLOOR CHICAGO, IL 60606				
EXAMINER				
KNABLE, GEOFFREY L				
ART UNIT		PAPER NUMBER		
1791				
MAIL DATE		DELIVERY MODE		
03/16/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/573,450

**Applicant(s)**

TAKAHASHI ET AL.

**Examiner**

Geoffrey L. Knable

**Art Unit**

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/DP)  
Paper No(s)/Mail Date 5/15/2006
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

1. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 4-7, given that these lines do not clearly define active method steps, it is not clear if these lines are defining additional required method steps or simply further characterizing the resultant relative product features by the method steps.

In line 3 of claims 2 and 3, "code" should be "cord".

In claim 2, lines 6-7, the reference made to "a space between bead cores disposed on both end portions of the cylindrical band" renders the claim indefinite and confusing as it is not clear what if any additional method step(s) this claim requires with respect to the "bead cores". Thus, for example, it is not clear whether this requires a step of disposing the bead cores on the band and if so, this should be more clearly and unambiguously defined. At present, this requirement can be read as simply referencing a "space" defined by for example *future* or *intended* location of the bead cores but not in fact requiring a step of disposing the bead cores. Clarification is therefore required of the scope of the claim in this regard. An analogous ambiguity is present in claim 5, lines 4-5 and claim 6, lines 4-5.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mirtain (US 3,442,315) taken in view of the admitted state of the prior art.

Mirtain discloses a tire including a radial ply layer (18) and another ply layer (19/20/21) positioned over the radial ply and having cords crossing the cords of the radial ply layer. Further, Mirtain suggests that metallic/steel wire cords may be used in one ply and polyester cords in the other ply (col. 4, lines 28-29; col. 5, lines 13-14). Providing steel cords in the inner ply and organic cords (e.g. polyester) in the outer ply would therefore have been obvious following these teachings. Mirtain does not however specifically describe how the tire is formed and thus does not specifically suggest formation of a cylindrical carcass band. Building a tire carcass band initially as

a cylindrical band is however a well known and typical tire building process as exemplified by the admitted state of the prior art in paragraph 2 on pages 1-2 of the specification. To build the Mirtain tire carcass as a cylindrical band would therefore have been obvious in this art. A process as required by claim 1 would therefore have been obvious. As to claim 2, the cords of the radial ply (18) are radial or substantially radial and would be substantially equal to 100% of the width between the beads (for the fig. 1 embodiment) or well within the 60-100% range for the two plies collectively for the fig. 3 embodiment. As to claim 3, the radial cords are substantially 90 degrees and the belt layer (17), which can include organic cords, the cords being at low angles to the equator (e.g. note col. 3, lines 52-57), satisfies the requirement for a second shape retaining layer. As to claim 4, Mirtain suggests that the cords in the ply (19) can be 5-45 degrees to the radial plane, this overlapping and thereby rendering obvious a crossing angle within the claimed range. As to claim 5, again, the low angled and narrower width organic belt would satisfy the claimed requirements for the second shape retaining layer. As to claim 6, the width of the belt in Mirtain as depicted would have rendered obvious a relative width within the claimed range. As to claim 7, Mirtain suggests that the cords in the ply (19) can be 5-45 degrees to the radial plane, this overlapping and thereby rendering obvious a crossing angle within the claimed range. As to the crossing angle of the second shape layer, as the belt plies are suggested to be at typical relatively low bias angles to the equator (e.g. col. 1, lines 61+; col. 3, lines 52+) and, as taken to be extremely well known, typical belt angles are for example ~23 degrees to the equator (and thus 67 degrees to the radial direction) and angle relative to the radial

carcass ply cords within the claimed range would have been obvious. As to claim 8, a tire would likewise have been obvious for the same reasons advanced with respect to the respect method claims.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Oohashi et al. (US 5,164,029), Simpson (US 3,703,203) and JP 3-227705 to Sasaki are other examples of tires including a ply outside and with cords crossing a radial steel carcass but are at present no more relevant to the applied prior art.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Geoffrey L. Knable/  
Primary Examiner, Art Unit 1791

G. Knable  
March 12, 2010